(FILE 'HOME' ENTERED AT 10:53:15 ON 02 AUG 2001)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 10:53:31 ON 02 AUG 2001

L1 27851 S (NEUROLOGICAL DISEASE OR NEUROLOGICAL DISORDER) OR ALZHEIMERS

L2 10154 S L1 AND (TREATMENT OR THERAPY OR TREAT OR METHOD)

L3 69 S L2 AND STEM CELL

L4 0 S L3 AND MYELOID

L5 58 DUP REMOVE L3 (11 DUPLICATES REMOVED)

```
=> d his

     (FILE 'HOME' ENTERED AT 12:46:35 ON 02 AUG 2001)

     FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 12:46:49 ON 02 AUG 2001
L1         27851 S (NEUROLOGICAL DISEASE OR NEUROLOGICAL DISORDER) OR
ALZHEIMERS
L2         10601 S L1 AND (TREATMENT OR THERAPY OR TREAT? OR METHOD)
L3            69 S L2 AND STEM CELL
L4            58 DUP REMOVE L3 (11 DUPLICATES REMOVED)
```

L4 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:523406 CAPLUS
TITLE: Neural **stem cell** transplantation in the repair of spinal cord injury
AUTHOR(S): Iannotti, Christopher; Lu, Xiaobin; Lu, Peihua; Xu, Xiaoming
CORPORATE SOURCE: Department of Anatomy and Neurobiology, Saint Louis University School of Medicine, St. Louis, MO, 63104, USA
SOURCE: Prog. Nat. Sci. (2001), 11(7), 490-502, plate I
CODEN: PNASEA; ISSN: 1002-0071
PUBLISHER: Science in China Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Neural **stem cells** are a promising candidate for neural transplantation aimed at neural cell replacement and repair of the damaged host central nervous system (CNS). Recent studies using neural **stem cells** have shown that implanted neural **stem cells** can effectively incorporate into the damaged CNS and differentiate into neurons, astrocytes, and oligodendrocytes. The recent explosion in the field of neural **stem cell** research has provided insight into the inductive factors influencing neural **stem cell** differentiation and may yield potential **therapies** for several **neurol. disorders**, including spinal cord injury. In this review, we summarize recent studies involving neural **stem cell** biol. in both rodents and humans. We also discuss unique advantages and possible mechanisms of using neural **stem cell** transplantation in the repair of spinal cord injury.

L4 ANSWER 4 OF 58 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:262292 CAPLUS
DOCUMENT NUMBER: 135:14389
TITLE: Recent advances in **stem cell** technology for **treatment** of Parkinson's disease
AUTHOR(S): Sawamoto, Kazunobu; Okano, Hideyuki
CORPORATE SOURCE: Graduate School of Medicine, Osaka University, Japan
SOURCE: Igaku no Ayumi (2001), 196(5), 367-372
CODEN: IGAYAY; ISSN: 0039-2359
PUBLISHER: Ishiyaku Shuppan
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 26 refs., on embryonic **stem cell** technol. in regeneration of dopamine neurons for **treatment** of Parkinson's disease.

L4 ANSWER 5 OF 58 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:382063 CAPLUS
TITLE: Neural **stem cell** technology as a novel **treatment** for Parkinson's disease
AUTHOR(S): Armstrong, Richard J. E.; Rosser, Anne E.; Dunnett, Stephen B.; Barker, Roger A.
CORPORATE SOURCE: Cambridge Centre for Brain Repair, Cambridge, UK
SOURCE: Methods Mol. Med. (2001), 62(Parkinson's Disease), 289-307
CODEN: MMMEFN
PUBLISHER: Humana Press Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review, with 57 refs., on **stem cells** of the central nervous system, **methods** used for successfully growing embryonic rat expanded neural precursor cells (ENPs), and procedures for and effects

L4 ANSWER 15 OF 58 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2[redacted]1063278 MEDLINE
DOCUMENT NUMBER: 2[redacted]16205 PubMed ID: 10959037
TITLE: Emerging neuroprotective strategies for Alzheimer's disease: dietary restriction, telomerase activation, and **stem cell therapy**.
AUTHOR: Mattson M P
CORPORATE SOURCE: Laboratory of Neurosciences - 4F01, National Institute on Aging, 5600 Nathan Shock Drive, Baltimore, MD 23224, USA.. mattsonm@grc.nia.nih.gov
SOURCE: EXPERIMENTAL GERONTOLOGY, (2000 Jul) 35 (4) 489-502. Ref: 99
Journal code: EPQ. ISSN: 0531-5565.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001222

AB The molecular, biochemical and cellular events that result in synaptic dysfunction and neuronal degeneration in the brain in Alzheimer's disease (AD) are becoming known. Age-related increases in cellular oxidative stress, and impairment of energy metabolism, result in disruption of neuronal calcium homeostasis and increased vulnerability of neurons to excitotoxicity and apoptosis. Inherited forms of AD that result from mutations in the beta-amyloid precursor protein (APP) and presenilins accelerate the neurodegenerative cascade by increasing production and deposition of neurotoxic forms of amyloid beta-peptide and by perturbing calcium homeostasis. Dietary restriction (DR; reduced calorie intake with maintained nutrition) extends life span of rodents and (probably) humans. DR increases resistance of neurons to dysfunction and degeneration, and improves behavioral outcome, in experimental models of AD and other age-related neurodegenerative disorders by a mechanism involving a mild stress response. Telomerase, a specialized reverse transcriptase, has been proposed to possess anti-aging properties. The catalytic subunit of telomerase (TERT) is expressed in neurons throughout the brain during development, but is absent from neurons in the adult brain. TERT exhibits neuroprotective properties in experimental models of neurodegenerative disorders suggesting that manipulations that induce telomerase in neurons may protect against age-related neurodegeneration. Finally, the exciting and exploding field of **stem cell** research suggests **methods** for replacing damaged or lost brain cells in an array of **neurological disorders**.

L4 ANSWER 17 OF 58 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:425276 BIOSIS
DOCUMENT NUMBER: PREV200000425276
TITLE: From mice to primates: Getting closer to neural **stem cell**-based **therapy** of human **neurological diseases**.
AUTHOR(S): Ourednik, J. (1); Ourednik, V. (1); Teng, Y. (1); Kosaras, B.; Sidman, R. L.; Schachner, M.; Redmond, D. E., Jr.; Snyder, E. Y. (1)
CORPORATE SOURCE: (1) Dept of Neurology, Children's Hospital, Harvard Medical School, Boston, MA USA
SOURCE: Experimental Neurology, (August, 2000) Vol. 164, No. 2, pp. 444-445. print.
Meeting Info.: Seventh Annual Conference of the American Society for Neural Transplantation and Repair Clearwater, Florida, USA April 27-30, 2000
ISSN: 0014-4886.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 20 OF 58 BIOSIS COPYRIGHT 2001 BIOSIS

LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 37 OF 58 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1999343433 MEDLINE
DOCUMENT NUMBER: 99343433 PubMed ID: 10416990
TITLE: Human neural **stem cells**: isolation, expansion and transplantation.
AUTHOR: Svendsen C N; Caldwell M A; Ostenfeld T
CORPORATE SOURCE: MRC Cambridge Centre for Brain Repair, University of Cambridge, UK.. cns1000@hermes.ac.uk
SOURCE: BRAIN PATHOLOGY, (1999 Jul) 9 (3) 499-513. Ref: 93
Journal code: BYB; 9216781. ISSN: 1015-6305.
PUB. COUNTRY: Switzerland
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19991012
Last Updated on STN: 19991012
Entered Medline: 19990927

AB Neural **stem cells**, with the capacity to self renew and produce the major cell types of the brain, exist in the developing and adult rodent central nervous system (CNS). Their exact function and distribution is currently being assessed, but they represent an interesting cell population, which may be used to study factors important for the differentiation of neurons, astrocytes and oligodendrocytes. Recent evidence suggests that neural **stem cells** may also exist in both the developing and adult human CNS. These cells can be grown in vitro for long periods of time while retaining the potential to differentiate into nervous tissue. Significantly, many neurons can be produced from a limited number of starting cells, raising the possibility of cell replacement **therapy** for a wide range of **neurological disorders**. This review summarises this fascinating and growing field of neurobiology, with a particular focus on human tissues.

L4 ANSWER 40 OF 58 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 2000100399 MEDLINE
DOCUMENT NUMBER: 20100399 PubMed ID: 10636444
TITLE: Neural **stem cells** -- a versatile tool for cell replacement and gene **therapy** in the central nervous system.
AUTHOR: Ourednik V; Ourednik J; Park K I; Snyder E Y
CORPORATE SOURCE: Department of Neurology, Harvard Medical School, Children's Hospital, Boston, MA 02115, USA.. ourednik@a1.tch.harvard.edu
SOURCE: CLINICAL GENETICS, (1999 Oct) 56 (4) 267-78. Ref: 33
Journal code: DDT; 0253664. ISSN: 0009-9163.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000309
Last Updated on STN: 20000309
Entered Medline: 20000223

AB In recent years, it has become evident that the developing and even the adult mammalian central nervous system contains a population of undifferentiated, multipotent cell precursors, neural **stem cells**, the plastic properties of which might be of advantage for the design of more effective **therapies** for many **neurological diseases**. This article reviews the recent progress in establishing rodent and human clonal neural **stem cell** lines, their biological properties, and how these cells can be utilized to a correct variety of defects, with prospects for the near future to harness their behaviour for neural **stem cell** -based **treatment** of diseases in

CODEN: 67CYA3
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review with 84 refs. In recent years a significant no. of **neurol. diseases** have been defined at the mol. level. Somatic gene **therapy** using genetically modified non-neuronal cells expressing therapeutic factors have been successfully used in animal models of neurodegenerative diseases. Ability to grow central nervous system (CNS)-derived neural progenitor cells has proven to be extremely useful to study a diverse phenomenon including the fate choice, differentiation, and synaptic maturation of cells. Immortal or perpetual cultures of neural progenitor cells implanted into the rodent brain survive, migrate, and integrate in the host cytoarchitecture. These cells can be genetically modified to express therapeutic gene products. The ability of the implanted cells to integrate in the host brain and express transgene products in situ offer potential approaches for gene **therapy** in certain CNS diseases. The utility of this approach has already been explored in animal models of neurodegenerative diseases. This chapter reviews the recent advances made in understanding the nature and potentiality of neural progenitor cells in vitro and in vivo as well as their possible use for cell replacement and gene **therapy**.

REFERENCE COUNT: 84
REFERENCE(S):
(1) Ahmed, S; J Neurosci 1995, V15, P5765 CAPLUS
(3) Barbacid, M; Curr Opin Cell Biol 1995, V7, P148 CAPLUS
(4) Bartlett, P; Proc Natl Acad Sci USA 1988, V85, P3255 CAPLUS
(6) Bernard, O; J Neurosci Res 1989, V24, P9 CAPLUS
(7) Calof, A; Curr Opin Neurobiol 1995, V5, P19 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 44 OF 58 MEDLINE
ACCESSION NUMBER: 1998450854 MEDLINE
DOCUMENT NUMBER: 98450854 PubMed ID: 9777679
TITLE: Remyelination: cellular and gene **therapy**.
AUTHOR: Billinghurst L L; Taylor R M; Snyder E Y
CORPORATE SOURCE: Department of Neurology, Harvard Medical School, Children's Hospital, Boston, MA 02115, USA.
CONTRACT NUMBER: NS33852 (NINDS)
NS34247 (NINDS)
P30-HD18655 (NICHD)
SOURCE: SEMINARS IN PEDIATRIC NEUROLOGY, (1998 Sep) 5 (3) 211-28.
Ref: 118
Journal code: CLK; 9441351. ISSN: 1071-9091.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990301
Last Updated on STN: 19990301
Entered Medline: 19990218

AB Dysfunctional myelination or oligodendroglial abnormalities play a prominent role in a vast array of pediatric **neurological diseases** of genetic, inflammatory, immunological, traumatic, ischemic, developmental, metabolic, and infectious causes. Recent advances in glial cell biology have suggested that effective remyelination strategies may, indeed, be feasible. Evidence for myelin repair is accumulating in various experimental models of dysmyelinating and demyelinating disease. Attempts at remyelination have either been directed towards creating myelin de novo from exogenous sources of myelin-elaborating cells or promoting an intrinsic spontaneous remyelinating process. Ultimately, some disorders of myelin may require multiple repair strategies, not only the replacement of dysfunctional

(FILE 'HOME' ENTERED AT 13:59:55 ON 02 AUG 2001)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE' ENTERED AT 14:00:11 ON 02 AUG 2001

E OUREDNIK

E OUREDNIK/AU

L1 41 S E7 OR E8 OR E9 OR E10

L2 22 DUP REMOVE L1 (19 DUPLICATES REMOVED)

L2 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:77675 CAPLUS
TITLE: Neural stem cells display extensive tropism for pathology in adult brain: evidence from intracranial gliomas
AUTHOR(S): Aboody, Karen S.; Brown, Alice; Rainov, Nikolai G.; Bower, Kate A.; Liu, Shaoxiong; Yang, Wendy; Small, Juan E.; Herrlinger, Ulrich; **Ourednik, Vaclav**; Black, Peter McL.; Breakefield, Xandra O.; Snyder, Evan Y.
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (2001), 98(2), 777
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal; Errata
LANGUAGE: English
AB Unavailable

L2 ANSWER 2 OF 22 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001042129 EMBASE
TITLE: Erratum: Neural stem cells display extensive tropism for pathology in adult brain: Evidence from intracranial gliomas (Proceedings of the National Academy of Sciences of USA (November 7, 2000) 97 (12846-12851)).
AUTHOR: Aboody K.S.; Brown A.; Rainov N.G.; Bower K.A.; Liu S.; Yang W.; Small J.E.; Herrlinger U.; **Ourednik V.**; Black P. McL.; Breakefield X.O.; Snyder E.Y.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (16 Jan 2001) 98/2 (777).
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Errata
FILE SEGMENT: 008 Neurology and Neurosurgery
LANGUAGE: English

L2 ANSWER 3 OF 22 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001076328 MEDLINE
DOCUMENT NUMBER: 20524089 PubMed ID: 11070094
TITLE: From the cover: neural stem cells display extensive tropism for pathology in adult brain: evidence from intracranial gliomas.
COMMENT: Comment in: Proc Natl Acad Sci U S A. 2000 Nov 7;97(23):12391-2
Comment in: Proc Natl Acad Sci U S A. 2000 Nov 7;97(23):12393-5
AUTHOR: Aboody K S; Brown A; Rainov N G; Bower K A; Liu S; Yang W; Small J E; Herrlinger U; **Ourednik V**; Black P M; Breakefield X O; Snyder E Y
CORPORATE SOURCE: Departments of Neurology, Pediatrics, and Neurosurgery, Children's Hospital, Boston, MA, USA.
CONTRACT NUMBER: CA69246 (NCI)
CA86768 (NCI)
HD07466 (NICHD)
+
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2000 Nov 7) 97 (23) 12846-51.
Journal code: PV3. ISSN: 0027-8424.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010111

cerebral ventricles), the donor cells migrate through normal tissue targeting the tumor cells (including human glioblastomas). When implanted outside the CNS intravascularly, NSCs will target an intracranial tumor. NSCs can deliver a therapeutically relevant molecule-cytosine deaminase-such that quantifiable reduction in tumor burden results. These data suggest the adjunctive use of inherently migratory NSCs as a delivery vehicle for targeting therapeutic genes and vectors to refractory, migratory, invasive brain tumors. More broadly, they suggest that NSC migration can be extensive, even in the adult brain and along nonstereotypical routes, if pathology (as modeled here by tumor) is present.

L2 ANSWER 4 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:425319 BIOSIS
DOCUMENT NUMBER: PREV200000425319
TITLE: Transplantation of neural stem cells seeded in biodegradable polymer scaffold ameliorates long-term functional deficits resulting from spinal cord hemisection in adult rats.
AUTHOR(S): Teng, Y. D. (1); Lavik, E.; Qu, X. L. (1); **Ourednik, J. (1)**; Park, K. I. (1); Langer, R.; Snyder, E. Y. (1)
CORPORATE SOURCE: (1) Department of Neurology, Children's Hospital and Harvard Medical School, Boston, MA, 02115 USA
SOURCE: Experimental Neurology, (August, 2000) Vol. 164, No. 2, pp. 455. print.
Meeting Info.: Seventh Annual Conference of the American Society for Neural Transplantation and Repair Clearwater, Florida, USA April 27-30, 2000
ISSN: 0014-4886.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 5 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:425278 BIOSIS
DOCUMENT NUMBER: PREV200000425278
TITLE: Human neural stem cells survive, migrate, and differentiate into TH-positive neurons in mesencephalon of adult MPTP-treated non-human primates.
AUTHOR(S): Redmond, D. E., Jr. (1); **Ourednik, J.; Ourednik, V.**; Roth, R. H. (1); Elsworth, J. D. (1); Sladek, J. R., Jr.; Teng, Y. D.; Hack, M.; Sidman, R. L.; Snyder, E. Y.
CORPORATE SOURCE: (1) Yale Univ. of Sch. of Med., New Haven, CT, 06520 USA
SOURCE: Experimental Neurology, (August, 2000) Vol. 164, No. 2, pp. 445. print.
Meeting Info.: Seventh Annual Conference of the American Society for Neural Transplantation and Repair Clearwater, Florida, USA April 27-30, 2000
ISSN: 0014-4886.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 6 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:425277 BIOSIS
DOCUMENT NUMBER: PREV200000425277
TITLE: Human neural stem cells participate in brain development in the old world monkey Macaca radiata.
AUTHOR(S): **Ourednik, V. (1); Ourednik, J. (1)**; Flax, J. (1); Zawada, M.; Hutt, C.; Yang, C. L. (1); Park, K. I. (1); Kim, S. U.; Sidman, R. L.; Freed, C. R.; Snyder, E. Y. (1)
CORPORATE SOURCE: (1) Children's Hospital, Harvard Medical School, Boston, MA USA
SOURCE: Experimental Neurology, (August, 2000) Vol. 164, No. 2, pp. 445. print.
Meeting Info.: Seventh Annual Conference of the American Society for Neural Transplantation and Repair Clearwater, Florida, USA April 27-30, 2000
ISSN: 0014-4886.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

TITLE: From mice to primates: Getting closer to neural stem cell-based therapy of human neurological diseases.

AUTHOR(S): **Ourednik, J. (1); Ourednik, V. (1)**; Teng, Y. (1); Kosaras, B.; Sidman, R. L.; Schachner, M.; Redmond, D. E., Jr.; Snyder, E. Y. (1)

CORPORATE SOURCE: (1) Dept of Neurology, Children's Hospital, Harvard Medical School, Boston, MA USA

SOURCE: Experimental Neurology, (August, 2000) Vol. 164, No. 2, pp. 444-445. print.
Meeting Info.: Seventh Annual Conference of the American Society for Neural Transplantation and Repair Clearwater, Florida, USA April 27-30, 2000
ISSN: 0014-4886.

DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 8 OF 22 MEDLINE
ACCESSION NUMBER: 2001137311 MEDLINE
DOCUMENT NUMBER: 21014499 PubMed ID: 11131542
TITLE: Neural stem cells are uniquely suited for cell replacement and gene therapy in the CNS.

AUTHOR: **Ourednik V; Ourednik J**; Park K I; Teng Y D; Aboody K A; Auguste K I; Taylor R M; Tate B A; Snyder E Y

CORPORATE SOURCE: Departments of Neurology (Division of Neuroscience), Pediatrics (Division of Newborn Medicine), & Neurosurgery, Children's Hospital, Harvard Medical School, Boston, MA 02115, USA.

SOURCE: NOVARTIS FOUNDATION SYMPOSIUM, (2000) 231 242-62; discussion 262-9, 302-6. Ref: 33
Journal code: C3Y; 9807767.

PUB. COUNTRY: England: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW LITERATURE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010308

AB In recent years, it has become evident that the developing and even the adult mammalian CNS contain a population of undifferentiated, multipotent cell precursors, neural stem cells, the plastic properties of which might be of advantage for the design of more effective therapies for many neurological diseases. This article reviews the recent progress in establishing rodent and human clonal neural stem cell lines, their biological properties, and how these cells can be utilized to correct a variety of defects, with prospects for the near future to harness their behaviour for neural stem cell-based treatment of diseases in humans.

L2 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:75647 BIOSIS
DOCUMENT NUMBER: PREV200100075647
TITLE: A ricin-induced lower motor neuron degenerative disease model in primates.

AUTHOR(S): Teng, Y. D. (1); Sidman, R. L.; De Girolami, U.; **Ourednik, V.; Ourednik, J.**; Redmond, D. E.; Qu, X.; Kosaras, B.; Maragakis, N.; Rothstein, J. D.; Snyder, E. Y.

CORPORATE SOURCE: (1) Children's Hospital, Harvard Medical School, Boston, MA USA

SOURCE: Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-85.11. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New Orleans, LA, USA November 04-09, 2000 Society for Neuroscience
. ISSN: 0190-5295.

DOCUMENT TYPE: Conference

unequivocal neurogenic atrophy unilaterally. In some monkeys, grouped atrophy was prominent, and was interpreted to indicate ongoing preterminal motor axon sprouting and recruitment of additional muscle fibers into individual motor units, followed by further lower motor neuron degeneration. That is, the atrophic patches were too large to represent normal-sized motor units. Central displacement of muscle cell nuclei and prominent bluish-stained muscle fibers in HEPSILON-stained sections suggested ongoing muscle regeneration. Transverse cryostat sections of lumbar spinal cord showed loss of large motor neurons with replacement by microglial cell clusters.

L2 ANSWER 10 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:146044 BIOSIS
DOCUMENT NUMBER: PREV200000146044
TITLE: Transplantation of human neural stem cells (NSCs): Insights from non-human primate experiments.
AUTHOR(S): **Ourednik, V. (1); Ourednik, J. (1);** Flax, J. (1); Zawada, M.; Hutt, C.; Yang, C. L. (1); Park, K. I. (1); Freed, C. R.; Snyder, E. Y. (1)
CORPORATE SOURCE: (1) Children's Hospital, Harvard Medical School, Boston, MA, 02115 USA
SOURCE: Society for Neuroscience Abstracts., (1999) Vol. 25, No. 1-2, pp. 1310.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA October 23-28, 1999
Society for Neuroscience
. ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 11 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:146045 BIOSIS
DOCUMENT NUMBER: PREV200000146045
TITLE: Massive regeneration of substantia nigra (SN) neurons in aged Parkinsonian mice after transplantation of neural stem cells (NSCs) overexpressing L1.
AUTHOR(S): **Ourednik, J. (1); Ourednik, V. (1);** Snyder, E. Y.; Schaclmer, M. (1)
CORPORATE SOURCE: (1) ETH Zuerich, CH-8093, Zuerich Switzerland
SOURCE: Society for Neuroscience Abstracts., (1999) Vol. 25, No. 1-2, pp. 1310.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA October 23-28, 1999
Society for Neuroscience
. ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 12 OF 22 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000100399 MEDLINE
DOCUMENT NUMBER: 20100399 PubMed ID: 10636444
TITLE: Neural stem cells -- a versatile tool for cell replacement and gene therapy in the central nervous system.
AUTHOR: **Ourednik V; Ourednik J;** Park K I; Snyder E Y
CORPORATE SOURCE: Department of Neurology, Harvard Medical School, Children's Hospital, Boston, MA 02115, USA.. ourednik@a1.tch.harvard.edu
SOURCE: CLINICAL GENETICS, (1999 Oct) 56 (4) 267-78. Ref: 33
Journal code: DDT; 0253664. ISSN: 0009-9163.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English

future to harness their behaviour for neural stem cell-based treatment of diseases in humans.

L2 ANSWER 13 OF 22 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1998250430 MEDLINE
DOCUMENT NUMBER: 98250430 PubMed ID: 9590548
TITLE: Remodeling of lesioned kitten visual cortex after xenotransplantation of fetal mouse neopallium.
AUTHOR: **Ourednik J**; Ourednik W; Mitchell D E
CORPORATE SOURCE: Department of Psychology, Life Sciences Center, Dalhousie University, Halifax, Nova Scotia, Canada.. jitka.ourednik@neuro.biol.ethz.ch
SOURCE: JOURNAL OF COMPARATIVE NEUROLOGY, (1998 May 25) 395 (1) 91-111.
Journal code: HUV; 0406041. ISSN: 0021-9967.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980625
Last Updated on STN: 19980625
Entered Medline: 19980618

AB Remodeling of the mechanically injured cerebral cortex of kittens was studied in the presence of a neural xenograft taken from mouse fetuses. Solid neural tissue from the neopallium of a 14-day-old fetus was transferred into a cavity prepared in visual cortical area 18 of 33-day-old kittens. Injections of bromodeoxyuridine (BrdU) were used to monitor postoperative cell proliferation. Two months after transplantation, the presence of graft tissue in the recipient brain was assessed by Thy-1 immunohistochemistry. Antibodies specific for neurons, astrocytes, and oligodendrocytes and hematoxylin staining for endothelial cells were used for the characterization of proliferating (BrdU+) cells. The following were the major observations: 1) Of ten transplanted kittens, four had the cavity completely filled with neural tissue that resembled the intact cerebral cortex in its cytoarchitecture, whereas, in four other kittens, the cavity was partially closed. In two kittens, the cavity remained or became larger, which was also the case with all four sham-operated (lesioned, without graft) animals. 2) A substantial part of the remodeled tissue was of host origin. Only a few donor cells survived and dispersed widely in the host parenchyme. 3) In the remodeled region of transplanted animals, the densities of nerve, glial, and endothelial cells were similar to those in intact animals. 4) Cell proliferation increased after transplantation but only within a limited time, because, 2 months after the operation, the number of mitotic cells in the grafted cerebral cortex did not differ from that in intact controls. Our data suggest that the xenograft evokes repair processes in the kitten visual cortex that lead to structural recovery from a mechanical insult. The regeneration seems to rely on a complex interplay of many different mechanisms, including attenuation of necrosis, cell proliferation, and immigration of host cells into the wounded area.

L2 ANSWER 14 OF 22 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 96357356 MEDLINE
DOCUMENT NUMBER: 96357356 PubMed ID: 8750085
TITLE: Preservation of the structural integrity of a freshly lesioned or transplanted mouse neocortex and the immunoreactivity of cell-specific marker proteins in demineralized histological material.
AUTHOR: **Ourednik J**; Ourednik W
CORPORATE SOURCE: Department of Psychology, Dalhousie University, Halifax, Nova Scotia, Canada.
SOURCE: JOURNAL OF NEUROSCIENCE METHODS, (1995 Nov) 62 (1-2) 55-63.
Journal code: K9V; 7905558. ISSN: 0165-0270.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

preparation of serial sections from brains together with neurocrania. To check their immunoreactivity, the sections were further reacted with specific antisera for glial fibrillary acidic protein (GFAP), microtubule-associated protein 2 (MAP2), calbindin, and the thermolabile cell-surface glycoprotein Thy-1. The histological material revealed excellent structural integrity and cytoarchitecture. In transplanted animals, the tiny graft, protected by the overlying bone, was found in the host cavity. Immunostaining showed typical localization of the chosen marker proteins. The anti-Thy-1 antibody enabled us to distinguish between graft and host tissues, which differed, in our experiments, in their expression of two distinct allelic forms of the Thy-1 molecule. The method lends itself perfectly to histochemical study of the earliest stages of freshly operated superficial brain regions in small laboratory animals, and should also be applicable to the evaluation of other brain structures which are difficult to gain access to without being damaged.

L2 ANSWER 15 OF 22 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 94362189 MEDLINE
DOCUMENT NUMBER: 94362189 PubMed ID: 8080961
TITLE: Newly formed host cells in a grafted juvenile neocortex express neurone-specific marker proteins.
AUTHOR: Ourednik W; **Ourednik J**
CORPORATE SOURCE: Department of Anatomy and Neurobiology, Dalhousie University, Halifax, N.S., Canada.
SOURCE: NEUROREPORT, (1994 May 9) 5 (9) 1073-6.
Journal code: A6M; 9100935. ISSN: 0959-4965.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941021
Last Updated on STN: 19970203
Entered Medline: 19941011

AB Recently we reported that a mouse foetal neural graft, when transferred into a lesioned juvenile neocortex, may induce cortical repair and stimulate proliferation of the host cells. The present study was focused on an immunohistochemical identification of neurones among these newly generated cells. Adjacent sections from the brains already used in our previous study were stained either with an antibody against the host-specific Thy-1 antigen, or with neurone-specific antibodies recognizing the microtubule-associated protein MAP2, the heavy subunit of neurofilaments and parvalbumin. Dividing cells, labelled repeatedly during the first three post-operative days with 3H-thymidine, were detected after 2 months by autoradiography. We found that in the repaired neocortical region newly formed host cells, whose distribution resembled the one found in an intact neocortex, also contained neurones. These new data corroborate our previous suggestion that a juvenile mammalian neocortex participates, after lesioning and under the presence of a foetal neural graft, in its own repair by the formation of new cells, including neurones.

L2 ANSWER 16 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1994:54234 BIOSIS
DOCUMENT NUMBER: PREV199497067234
TITLE: Do embryonic neural grafts induce repair by the injured juvenile neocortex.
AUTHOR(S): **Ourednik, J.**; Ourednik, W.; Van Der Loos, H.; Riederer, B. M.
CORPORATE SOURCE: Inst. Anatomy, Univ. Lausanne, 1005 Lausanne Switzerland
SOURCE: Society for Neuroscience Abstracts, (1993) Vol. 19, No. 1-3, pp. 1512.
Meeting Info.: 23rd Annual Meeting of the Society for Neuroscience Washington, D.C., USA November 7-12, 1993
ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English

LANGUAGE: English
FILE SEGMENT: [redacted]ority Journals
ENTRY MONTH: [redacted]403
ENTRY DATE: Entered STN: 19940406
Last Updated on STN: 19970203
Entered Medline: 19940331

AB Repair of mechanically injured primary somatosensory cortex in 3 week old mice was studied by placing small, solid foetal neurotransplants into large cortical cavities. After transplantation, the graft and host tissues were distinguished immunocytochemically owing to their expression of two different Thy-1 antigens. Cell proliferation was monitored by 3H-thymidine autoradiography. The following observations were made two months after operation: (i) In 8 out of 11 grafted animals new cortical tissue had taken the place of the cavity. (ii) Five of these 8 animals contained only host tissue; the remainder presented a small piece of grafted tissue. (iii) In the restored cortical area, newly generated cells were predominantly of host origin. These data suggest that the restorative capacity of the already post-mitotic cerebral cortex is not lost and may be reactivated. The presence of a foetal neural graft seems to favour this process.

L2 ANSWER 18 OF 22 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 82051655 MEDLINE
DOCUMENT NUMBER: 82051655 PubMed ID: 6795100
TITLE: Positive feedback effect of dihydrotestosterone on follicle-stimulating hormone secretion in the male rat: implications and a possible relation to the onset of puberty.
AUTHOR: Mittler J C; Ertel N H; **Ourednik J**
SOURCE: HORMONE AND METABOLIC RESEARCH, (1981 Oct) 13 (10) 569-71. Journal code: GBD; 0177722. ISSN: 0018-5043.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198201
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19820109

AB Follicle-stimulating hormone (FSH), luteinizing hormone (LH), and testosterone concentrations were measured in serum of adult male rats after 6 days of constant subcutaneous infusion of varying levels of dihydrotestosterone (DHT). Doses from one-half up to the normal "blood production rate" of DHT produced a selective stimulation of serum FSH, but not LH, levels. Higher levels suppressed FSH, LH, and testosterone. Despite the presence of much higher levels of testosterone in blood, the augmentation of FSH secretion indicated in these studies suggests that DHT may have an important role in regulatory systems for gonadotropins.

L2 ANSWER 19 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS DUPLICATE 8
ACCESSION NUMBER: 1981:30289 BIOSIS
DOCUMENT NUMBER: BR20:30289
TITLE: PSYCHO SOCIAL ADJUSTMENT IN DRUG ADDICTS EFFECT OF DOSAGE OF METHADONE.
AUTHOR(S): MAY P; **OUREDNIK J**; GRIBBON H; SCHNECK P; ERTERL N
CORPORATE SOURCE: DEP. PSYCHIATRY, VA MED. CENT., EAST ORANGE, N.J.
SOURCE: ANNUAL MEETING OF THE AMERICAN FEDERATION FOR CLINICAL RESEARCH, EASTERN SECTION, BOSTON, MASS., USA, OCT. 17-18, 1980. CLIN RES, (1980) 28 (3), 633A.
CODEN: CLREAS. ISSN: 0009-9279.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L2 ANSWER 20 OF 22 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 80187348 MEDLINE
DOCUMENT NUMBER: 80187348 PubMed ID: [redacted]

ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800712

AB The prolactin response to hypoglycemia was evaluated in 22 control subjects and 8 patients with hypothalamic-pituitary disease but normal basal serum prolactin levels. Eighteen of the 22 control subjects demonstrated at least a twofold prolactin rise in response to hypoglycemia. In contrast to the control subjects, none of the 8 patients demonstrated a prolactin response to hypoglycemia. This blunted prolactin response to hypoglycemia was the only endocrine abnormality in 3 of these 8 patients. In an attempt to better determine the sensitivity of the prolactin response to hypoglycemia as an index of early pituitary disease, the effect of a short course of estrogen on the prolactin response to hypoglycemia was examined. Estrogen was selected because of its known acute stimulatory effect on pituitary mitosis and chronic effects that lead to pituitary tumor formation in rodents. Accordingly, diethylstilbestrol (DES) 5 mg t.i.d. was administered orally to 6 normal men for 3 days, a period known to stimulate pituitary mitotic activity in rodents. Diethylstilbestrol treatment caused significant elevation of the baseline prolactin (8 +/- 2 versus 18 +/- 3 ng/ml, p less than 0.05); however, the prolactin response to hypoglycemia was blunted (8 +/- 2--30 +/- 10 ng/ml, p less than 0.05, before DES; 18 +/- 3--20 +/- 5 ng/ml after DES, p greater than 0.05). This estrogen-induced blunted prolactin response to hypoglycemia resembled the blunted prolactin response to hypoglycemia found in patients with hypothalamic-pituitary disease.

L2 ANSWER 21 OF 22 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1981:9451 BIOSIS
DOCUMENT NUMBER: BR20:9451
TITLE: PITUITARY HORMONE RESPONSE TO EXERCISE IN AMENORRHEIC BALLET DANCERS.
AUTHOR(S): COHEN J L; **OUREDNIK J**; MAY P B; KIM C S; ERTEL N H
CORPORATE SOURCE: DEP. MED., VETERANS ADM. MED. CENT., E. ORANGE, N.J. USA.
SOURCE: 37TH ANNUAL NATIONAL MEETING OF THE AMERICAN FEDERATION FOR CLINICAL RESEARCH, WASHINGTON, D.C., USA, MAY 10-12, 1980. CLIN RES, (1980) 28 (2), 257A.
CODEN: CLREAS. ISSN: 0009-9279.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L2 ANSWER 22 OF 22 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 80017211 EMBASE
DOCUMENT NUMBER: 1980017211
TITLE: Bromocriptine blocks estrogen induced pituitary growth & hyperprolactinemia.
AUTHOR: **Ourednik J.**; May P.; Mittler J.; et al.
CORPORATE SOURCE: Dept. Med., E. Orange VA Med. Cent., East Orange, N.J., United States
SOURCE: Clinical Research, (1979) 27/3 (575A).
CODEN: CLREAS
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: English

(FILE 'HOME' ENTERED AT 09:59:28 ON 02 AUG 2001)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 10:02:16 ON 02 AUG 2001

L1 105072 S STEM CELL
L2 11841 S L1 AND MYELOID
L3 0 S L2 AND (TREAT OR THERAPY) AND (NEUROLOGICAL DISEASE OR ALZHEI
L4 0 S L2 AND (NEUROLOGICAL DISEASE OR ALZHEIMERS OR PARKINSONS)
L5 1545 S L2 AND (GRAFT? OR ENGRAFT?)
L6 15 S L5 AND NERVOUS SYSTEM
L7 14 DUP REMOVE L6 (1 DUPLICATE REMOVED)

L7 ANSWER 1 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:317456 BIOSIS
DOCUMENT NUMBER: PREV200100317456
TITLE: Meeting summary of the Tenth International Symposium on Autologous Blood and Marrow Transplantation.
AUTHOR(S): Dicke, Karel A. (1)
CORPORATE SOURCE: (1) Arlington Cancer Center, 906 West Randol Mill Road, Arlington, TX, 76012: KDicke@accTex.com USA
SOURCE: Experimental Hematology (Charlottesville), (June, 2001) Vol. 29, No. 6, pp. 655-660. print.
ISSN: 0301-472X.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L7 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:316977 BIOSIS
DOCUMENT NUMBER: PREV200100316977
TITLE: Treatment of relapsing leukemia after allogeneic blood **stem cell** transplantation by using dose-reduced conditioning followed by donor blood **stem cells** and GM-CSF.
AUTHOR(S): Platzbecker, Uwe (1); Thiede, Christian; Freiberg-Richter, Jens; Helwig, Anett; Mohr, Brigitte; Prange, Gabriele; Fuessel, Monika; Koehler, Thomas; Ehninger, Gerhard; Bornhaeuser, Martin
CORPORATE SOURCE: (1) Medizinische Klinik I und Poliklinik, Universitaetsklinikum Carl Gustav Carus, Dresden, Fetscherstr. 74, 01307, Dresden: Platzbecker@oncocenter.de Germany
SOURCE: Annals of Hematology, (March, 2001) Vol. 80, No. 3, pp. 144-149. print.
ISSN: 0939-5555.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Ten patients with high-risk acute **myeloid** leukemia (AML), chronic **myeloid** leukemia (CML), and myelodysplastic syndrome (MDS) relapsing early (<1 year, n=8) or late (gtoreql year, n=2) after allogeneic transplantation were treated with cytoreductive chemotherapy followed by unmanipulated peripheral blood **stem cell** transplantation (PBSCT) from related (n=3) and unrelated donors (n=7). In order to enhance the **graft**-versus-leukemia effect, patients received no **graft**-versus-host disease (GVHD) prophylaxis and granulocyte-macrophage colony-stimulating factor (GM-CSF) was given at a dose of 60 mug/m2 after transplant. Acute GVHD grade I-IV was seen in all patients. Eight out of ten patients achieved complete remission: one out of two patients with AML and late relapse is in good condition with limited chronic GVHD more than 1 year after the second PBSCT. The other patient died on day +171 after the second PBSCT from cerebral aspergillosis. One patient with blastic phase CML achieved molecular remission but died +330 days after the second PBSCT because of intracranial bleeding. Of the remaining five patients, three died of infectious complications on days +36, +70, and +27, one patient died with extramedullary relapse on day +35, and one from multi-organ failure in association with acute GVHD on day +32 after the second PBSCT. Two out of ten showed progressive disease and died on days +30 and +90, respectively.

Although several patients achieved complete remission, the high risk of relapse must be kept in mind, especially when a second transplant is considered during a period of less than 12 months after the first procedure. Monitoring of minimal residual disease might predict relapse thus preventing high doses of cytotoxic drugs for reconditioning. The potential of GM-CSF to enhance the **graft**-versus-leukemia reactivity after cytoreductive th

DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L7 ANSWER 4 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:314027 BIOSIS
DOCUMENT NUMBER: PREV200100314027
TITLE: GM-CSF signaling through the beta-common subunit and chronic **myeloid** leukemia after NF1 gene loss.
AUTHOR(S): Morgan, Kelly J. (1); Hasz, Diane E. (1); Largaespada, David A. (1)
CORPORATE SOURCE: (1) Genetics, Cell Biology and Development and University of Minnesota Cancer Center, University of Minnesota, Minneapolis, MN USA
SOURCE: Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 459a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Neurofibromatosis type 1 (NF1) syndrome is an autosomal dominant disorder resulting from inheritance of one inactive copy of a tumor suppressor gene called NF1. Children with NF1 syndrome are predisposed to **myeloid** leukemia, especially juvenile myelomonocytic leukemia (JMML). Leukemia in these patients is thought to result from somatic loss of the wild-type allele. The NF1 gene encodes neurofibromin, which is a GTPase activating protein for Ras. Homozygous Nf1 gene knockout causes midgestation lethality due to a number of developmental defects. Hematopoietic precursors harvested from 12.5 day Nf1-/- fetal livers show hypersensitivity to the growth promoting effects of granulocyte-macrophage colony stimulating factor (GM-CSF). Lethally irradiated adult mice transplanted with Nf1-/- fetal liver blood **stem cells** develop a myeloproliferative disorder (MPD) with similarities to JMML. To determine if signaling through the GM-CSF receptor is required to initiate chronic MPD caused by Nf1 gene loss in vivo, we have generated double knockout C57BL/6J-Ly5.2 mouse embryos deficient for both the Nf1 gene and the betac gene, which encodes the signaling component of the GM-CSF receptor. Lethally irradiated C57BL/6J-Ly5.1 mice were transplanted with fetal liver blood **stem cells** deficient for both or only one of the two genes. Flow cytometric analysis, for the donor Ly5.2 allelic form of CD45, demonstrated clearly that Nf1-/-, betac-/- fetal liver blood **stem cells** are capable of fully **engrafting** myeloablated mice. Primary recipients of fetal liver blood **stem cells**, deficient for betac, Nf1, or both, were sacrificed and their bone marrow was used as a source of **stem cells** for secondary transplant into lethally irradiated C57BL/6J-Ly5.1 mice. These mice were followed for signs of MPD by twice monthly bleeds for total and differential white blood cell counts. At 20 weeks after transplant, mice reconstituted with Nf1-/-, betac-/- **stem cells** have not yet developed any increase in peripheral white blood cell counts or in the percentage of circulating **myeloid** cells, when compared to mice reconstituted with Nf1+/-, betac-/- **stem cells**. In contrast, previous work has clearly demonstrated that mice reconstituted with Nf1-/-, betac+/+ **stem cells** develop substantially increased total white blood cell counts and percent neutrophils compared to controls by 12-16 weeks after transplant. These results suggest that GM-CSF signaling through the betac protein is required to initiate CML after loss of the Nf1 gene.

L7 ANSWER 5 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:317022 BIOSIS
DOCUMENT NUMBER: PREV200100317022
TITLE: **Engraftment** syndrome (ES) after autologous hematopoietic **stem cell** transplant (AHSCT) supported by granulocyte colony-stimulating factor (G-CSF) or granulocyte-macrophage colony-stimul

SUMMARY LANGUAGE: English

AB The **engraftment** syndrome (ES) constitutes a clinical triad at the onset of WBC **engraftment** after AHSCT, associated predominantly with fever and a rash that mimics cutaneous acute GVHD. The syndrome either resolves spontaneously or responds promptly with treatment with steroids. We retrospectively examined 152 consecutive pts at our institution treated with AHSCT from 4/1/96 through 5/30/00. Underlying diagnoses included multiple myeloma (33%), non-Hodgkin's lymphoma (20%), breast ca (22%), Hodgkin's disease (9%), germ cell ca (3%), multiple sclerosis (3%), ovarian ca (3%), AML/MDS (3%), and other (4%). There were 95 females and 57 males, aged 23-72 years (median 47 years). Twenty pts (18 females; 2 males) developed ES, an incidence of 13%. ES developed at a median of 10 days (range 7-13) after transplant. ES developed at a mean WBC 680 (range 350-910). The incidence of ES was higher in pts receiving GM-CSF (16/66; 24%) compared to those patients receiving G-CSF (4/86; 4%), $p < 0.001$. There was a correlation between the development of ES with the number of CD34+ cells infused. The median CD34+ cell dose was 6.9106/kg for those with ES and 5.1106/kg for those not developing ES. The median number of CD34+ cells infused was 7.5106/kg for pts treated with GM-CSF and 5.9106/kg for pts treated with G-CSF ($p<0.001$). The incidence of ES varied with the underlying disease: it was highest in adjuvant breast ca (12/23; 52%), AML/MDS (2/4; 50%), Stage IV breast ca (2/10; 20%), ovarian ca(1/5; 20%), NHL (2/30; 6%), myeloma (1/50; 2%). None of the following developed ES: Hodgkin's disease (n=14), germ cell ca (n=5), multiple sclerosis (n=5), ALL, amyloidosis and sarcomas (each n=2). ES did not influence WBC or platelet **engraftment** which occurred at a median of 10 days and 19 days, respectively. In summary, we observed a 13% incidence of ES which correlated with total CD34+ cell dose infused and was seen more frequently in pts who received GM-CSF vs. G-CSF (24% vs. 4%; $p<0.001$). The higher incidence of ES in the patients treated with GM-CSF may be due, in part, to the higher CD34+ cell dose. The highest incidence of ES was observed in breast ca patients with relatively few cases in NHL and multiple myeloma. To reduce ES treatment-related morbidity, it may be advantageous to use only G-CSF in breast ca pts undergoing AHSCT. These findings should be verified in a randomized clinical trial.

L7 ANSWER 6 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS

ACCESSION NUMBER: 2001:317012 BIOSIS

DOCUMENT NUMBER: PREV200100317012

TITLE: Blood **stem cell** transplantation in 154 patients with cryopreservation of hematopoietic progenitor cells with 5-10% dimethylsulfoxide at -80degreeC without rate-controlled freezing.

AUTHOR(S): Bargay, Joan (1); Guerra, Jose Maria (1); Galmes, Antonio (1); Espeso, Manuel (1); Novo, Andres (1); Morey, Miguel (1); Duran, M. Antonia (1); Loscertales, Javier (1); Forteza, Alejandro (1); Besalduch, Joan (1)

CORPORATE SOURCE: (1) Hematology, Hospital Son Dureta, Palma de Mallorca, Balearic Islands Spain

SOURCE: Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 381a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.

DOCUMENT TYPE: Conference

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Between June 1993 to December 1999, we performed blood **stem cell** transplants in 154 patients with solid and hematologic malignancies (58 Breast Cancer, 34 NHL, 21 Acute Leukemia, 15 Multiple Myeloma, 13 Hodgkin Disease, 1 MDS, 1 CML and 7 other solid tumor) and 1 Multiple Sclerosis. Ninety six were women and 58 men. The median age of patients was 45 (range 2-64). The hematopoietic cells were cryopreserved with 5-10% dimethylsulfoxide as the sole cryoprotectant without rate-controlled freezing and stored in a -80degree mechanical freezer. The median number of transfused mononuclear cless, CD34+ cells and CFU-GM, was

L7 ANSWER 7 OF 14 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2[redacted]:328122 BIOSIS
DOCUMENT NUMBER: PREV200100328122
TITLE: Comparison of GCSF to GCSF/GMCSF for peripheral blood **stem cell** mobilization.
AUTHOR(S): Jacobi, Nicole; Pawlik-Plank, Darlene M.; Tipping, Stuart J.; Reding, Douglas J.; Mercier, Richard J.; Rushing, Daniel A.; Berg, Richard; Birhiray, Ruemu E.
SOURCE: Blood, (November 16, 2000) Vol. 96, No. 11 Part 2, pp. 316b. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Chemotherapy and growth factor mobilization is a well established method for the collection of peripheral blood **stem cells** (PBSC) for autologous transplantation. A target of 5 X 10 (6)CD 34+ cells/kg is desired to ensure rapid **engraftment**. The objective of this review was to assess and compare the **stem cell** collection yield between moblization with G-CSF and G-CSF/GM-CSF. Patients and Methods: We retrospectively reviewed the treatment of 33 patients undergoing PBSC collection (Non Hodgkin Lymphoma (NHL): 10, Breast Cancer (BC): 10, Multiple Myeloma (MM): 4, Ewings Sarcoma (ES): 1, Chronic Myelogenous Leukemia (CML): 1, Acute Non Lymphocytic Leukemia (ANLL): 1, Acute Lymphocytic Leukemia (ALL): 2, Hodgkins Lymphoma (HL): 2, Testicular Cancer (TC): 1, Brain Tumor (BT): 1). The patients were treated with chemotherapy for their underlying diseases. Mobilization chemotherapy included: Cytoxan, MINE, Methotrexate and MEGA for NHL, Ifosfamide for ES, Idarubicin/Ara-C for CML, Paclitaxel and Docetaxel for BC, Methotrexate/L-spar for ALL. G-CSF was used for 24 mobilizations and G-CSF/Gm-CSF was used for 9 mobilizations. Continuous flow apheresis with a Cobe Spectra was used for collections. PBSC yield was measured as CD 34+ X 10 (6)/kg. Discussion and conclusion There was no significant statistical difference in outcome between PBSC mobilization with G-CSF or G-CSF/GM-CSF. The heterogenous, small sample size receiving varied treatments does not support generalization of the results. Recent literature shows that GM-CSF yields more antigen presenting cells and for this reason may be a more favorable growth factor to use during mobilization of progenitor cells. Randomized studies are needed to adequately review these issues.